

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. **(Currently Amended)** A method of adapting a classification system, said method comprising the steps of:

providing a classification system, the classification system including at least one structural parameter and at least one derived function; and

utilizing Gaussian mixture models that represent both a target model and a global model;

adapting the classification system via adapting the at least one derived function of the classification system; and

selecting a model set from the global model set that includes more than one Gaussian mixture model;

wherein the adaptation utilizes a multidimensional space that is based upon the selected model set.

2. **(Original)** The method according to Claim 1, further comprising the steps of:
  - providing a set of trained data; and
  - obtaining a set of observation data.
3. **(Original)** The method according to Claim 1, wherein the at least one derived function of the classification system comprises at least one of: likelihoods and sets of likelihoods.
4. **(Original)** The method according to Claim 1, wherein said step of providing a classification system comprises providing a classification system configured for providing speaker verification.
5. **(Original)** The method according to Claim 4, wherein the at least one derived function of the classification system comprises at least one likelihood measure representing the likelihood of an acoustic utterance to be generated by a model.
6. **(Original)** The method according to Claim 1, wherein said adapting step comprises continuously adapting the classification system.
7. **(Original)** The method according to Claim 6, wherein said step of providing a classification system comprises providing a classification system configured for providing speaker verification.
8. **(Original)** The method according to Claim 7, wherein said adapting step comprises continuously adapting the classification system to new acoustic conditions.

9. **(Original)** The method according to Claim 8, wherein said step of continuously adapting the classification system comprises automatically detecting a new acoustic environment.

10. **(Currently Amended)** The method according to Claim 8, wherein said the step of continuously adapting the classification system comprises satisfying a preset security level in verifying the claimed identity of a speaker.

11. **(Currently Amended)** An apparatus for adapting a classification system, said apparatus comprising:

an arrangement for obtaining a classification system, the classification system including at least one structural parameter and at least one derived function; and  
an arrangement for utilizing Gaussian mixture models that represent both a target model and a global model;

an arrangement for adapting the classification system via adapting the at least one derived function of the classification system; and

an arrangement for selecting a model set from the global model set that includes more than one Gaussian mixture model;

an arrangement for wherein the adaptation utilizes a multidimensional space that is based upon the selected model set.

12. **(Original)** The apparatus according to Claim 11, further comprising:

an arrangement for obtaining a set of trained data; and

an arrangement for obtaining a set of observation data.

13. **(Original)** The apparatus according to Claim 11, wherein the at least one derived function of the classification system comprises at least one of: likelihoods and sets of likelihoods.

14. **(Original)** The apparatus according to Claim 11, wherein said classification system comprises providing a classification system configured for providing speaker verification.

15. **(Original)** The apparatus according to Claim 14, wherein the at least one derived function of the classification system comprises at least one likelihood measure representing the likelihood of an acoustic utterance to be generated by a model.

16. **(Original)** The apparatus according to Claim 11, wherein said adapting arrangement is configured for continuously adapting the classification system.

17. **(Original)** The apparatus according to Claim 16, wherein said classification system is configured for providing speaker verification.

18. **(Original)** The apparatus according to Claim 17, wherein said adapting arrangement is configured for continuously adapting the classification system to new acoustic conditions.

19. **(Original)** The apparatus according to Claim 18, wherein said adapting arrangement is configured for automatically detecting a new acoustic environment in continuously adapting the classification system to new acoustic conditions.

20. **(Original)** The apparatus according to Claim 18, wherein said adapting arrangement is configured for satisfying a preset security level in verifying the claimed identity of a speaker in continuously adapting the classification system to new acoustic conditions.

21. **(Currently Amended)** A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for adapting a classification system, said method comprising the steps of:

providing a classification system, the classification system including at least one structural parameter and at least one derived function; **and**

utilizing Gaussian mixture models that represent both a target model and a global model;

adapting the classification system via adapting the at least one derived function of the classification system; **and**

selecting a model set from the global model set that includes more than one Gaussian mixture model;

wherein the adaptation utilizes a multidimensional space that is based upon the selected model set.